

IN THE CLAIMS

Claims 1-38 (Canceled).

39. (Currently Amended) An access device comprising:

a text-based interface layer to a combined text-based interface generator and hypertext transport protocol (HTTP) client;

an HTTP server interface layer to a combined HTTP server and simple network management protocol (SNMP) manager; and

an SNMP agent interface layer to a ~~simple network management protocol (SNMP)~~ SNMP agent, wherein the SNMP agent generates a user interface and receives user input that specifies a change to configuration data stored in said access device and said SNMP agent transmits a first message to a the combined hypertext transport protocol (HTTP) server and SNMP manager using HTTP;

the combined HTTP server and SNMP manager, wherein the combined HTTP server and SNMP manager only accesses said configuration data by communicating with said SNMP agent and wherein in response to said first message, said combined HTTP server and SNMP manager transmits a second message to a ~~the~~ the combined text-interface generator and HTTP client using SNMP; and

the combined text-interface generator and HTTP client, wherein the combined text-interface generator and HTTP client only accesses said configuration data in response to said second message as specified by said user input by requesting said combined HTTP server and SNMP manager to communicate with said SNMP agent, so that all safety mechanisms are built into the SNMP agent to enhance security and wherein said ~~combined text-interface generator and HTTP client resides in said network~~ text-based interface layer, said HTTP server interface layer and said SNMP agent interface layer reside in the access device.

40. (Previously Presented) The access device of claim 39, wherein:

the combined HTTP server and SNMP manager generates hypertext mark-up language (HTML) documents that include anchors that contain identifiers for management information base (MIB) objects; and

the combined text-interface generator and HTTP client transmits to the combined HTTP server and SNMP manager messages that contain identifiers for MIB objects in response to input received from a user.

Claims 41-49 (Canceled).

50. (Currently Amended) A network device comprising:

means for providing a text-based interface to a combined text-based interface generator and hypertext transport protocol (HTTP) client;

means for providing an HTTP server interface to a combined HTTP server and simple network management protocol (SNMP) manager; and

means for providing an SNMP agent interface layer to a simple network management protocol [(C)]SNMP[(D)] agent[(E)] ~~generates to a user interface and receives~~ receive user input that specifies a change to configuration data stored in said access network device and said SNMP agent ~~transmits to~~ transmit a first message to a means for combining hypertext transport protocol (HTTP) server and SNMP manager using HTTP;

said means for combining HTTP server and SNMP manager, wherein the means for combining HTTP server and SNMP manager only accesses said configuration data by communicating with said SNMP agent and wherein in response to said first message, said means for combining HTTP server and SNMP manager ~~transmits to~~ transmit a second message to a means for combining text-interface generator and HTTP client using SNMP; and

said means for combining text-interface generator and HTTP client, wherein the means for combining text-interface generator and HTTP client to only accesses access said configuration data in response to said second message as specified by said user input by requesting the means for combining HTTP server and SNMP manager to communicate with said SNMP agent, so that all safety mechanisms are built into the SNMP agent to enhance security and wherein said means for ~~combining text-interface generator and HTTP client~~ providing said text-based interface layer, said HTTP server interface and said SNMP agent interface reside[[s]] in said network device.

51. (Previously Presented) The network device of claim 50, wherein:

the means for combining HTTP server and SNMP manager generates hypertext mark-up language (HTML) documents that include anchors that contain identifiers for management information base (MIB) objects; and

the means for combining text-interface generator and HTTP client transmits to the means for combining HTTP server and SNMP manager messages that contain identifiers for MIB objects in response to input received from a user.

52. (Previously Presented) The network device of claim 50, further comprising a user interface, said interface being optimized for speed and navigability.

53. (Previously Presented) The network device of claim 52, wherein the user interface is a duplicate in look-and-feel of a text menu system.

Claims 54-62 (Canceled).

63. (Previously Presented) A computer readable medium containing executable instructions which, when executed in a processing system, causes the system to perform a ~~method, the method~~ the following comprising:

provide a text-based interface layer to a combined text-based interface generator and hypertext transport protocol (HTTP) client;

provide an HTTP server interface layer to a combined HTTP server and simple network management protocol (SNMP) manager; and

provide an SNMP agent interface layer to ~~providing a simple network management protocol~~ [[()]]SNMP[[()]] agent, wherein the SNMP agent is configured to generate ~~generates a user interface and receives~~ user input that specifies a change to configuration data stored in said access device and said SNMP agent is configured to transmit ~~transmits~~ a first message to a combined hypertext transport protocol (HTTP) server and SNMP manager using HTTP;

provide a combined ~~combining~~ HTTP server and SNMP manager, wherein the combined HTTP server and SNMP manager is configured to only ~~accesses~~ access said configuration data by communicating with said SNMP agent and wherein in response to said first message, the combined HTTP server and SNMP manager is configured to transmit ~~transmits~~ a second message to a combined text-interface generator and HTTP client using SNMP; and

provide a combined ~~combining~~ text-interface generator and HTTP client, wherein the combined text-interface generator and HTTP client is configured to only ~~accesses~~ access said configuration data in response to said second message as specified by said user input by requesting said combined HTTP server and SNMP manager to communicate with said SNMP agent, so that all safety mechanisms are built into the SNMP agent to enhance security and wherein said a text-based interface layer, said HTTP server interface layer and said SNMP agent interface layer reside in said computer

~~readable medium~~~~combined text interface generator and HTTP client resides in said~~
~~network device.~~

64. (Previously Presented) The computer readable medium of claim 63 wherein:
the combined HTTP server and SNMP manager generates hypertext mark-up
language (HTML) documents that include anchors that contain identifiers for
management information base (MIB) objects; and
the combined text-interface generator and HTTP client transmits to the combined
HTTP server and SNMP manager messages that contain identifiers for MIB objects in
response to input received from a user.

65. (Previously Presented) The computer readable medium of claim 63, wherein the
method further comprises providing a user interface, said interface being optimized for
speed and navigability.

66. (Previously Presented) The computer readable medium of claim 65, wherein the
user interface is a duplicate in look-and-feel of a text menu system.

67. (New) The access device of claim 39, wherein the text-based interface layer does
not provide direct access to the configuration data.

68. (New) An apparatus, comprising:
one or more access devices, the one or more access devices comprising:
a text-based interface layer to a combined text-based interface generator
and hypertext transport protocol (HTTP) client;
an HTTP server interface layer to a combined HTTP server and simple
network management protocol (SNMP) manager;

a SNMP agent interface layer to a SNMP agent; and
configuration data, wherein the SNMP agent is the only module
configured to directly access the configuration data stored in the one or more
access devices.

69. (New) The apparatus of claim 68, wherein the SNMP manager resides within a
different access device of the one or more access devices than the SNMP agent and the
configuration data.

69. (New) The apparatus of claim 68, wherein the SNMP manager resides within a
same access device of the one or more access devices as the SNMP agent and the
configuration data.

70. (New) A network device having one or more processing devices to implement
code which when executed cause the one or more processors to perform the following
comprising:

executing a first software layer to generate a user interface;
said first software layer receiving user input that specifies a change to
configuration data stored in said network device;
in response to said user input, said first software layer transmitting a first message
to a second software layer using Hypertext Transport Protocol, wherein said second
software layer resides in said network device;
in response to said first message, said second software layer transmitting a second
message to a third software layer using Simple Network Management Protocol, wherein
said third software layer resides in said network device; and
in response to said second message, said third software layer changing said
configuration data as specified by said user input.

71. (New) The network device of claim 70, wherein
said first software layer is a text-based interface layer to a combined text-based
interface generator and hypertext transport protocol (HTTP) client, wherein
said second software layer is an HTTP server interface layer to a combined HTTP
server and simple network management protocol (SNMP) manager, and wherein
said third software layer is an SNMP agent interface layer.

72. (New) The network device of claim 70, wherein the code further causes the one
or more processors to perform the following comprising:
causing said second software layer to send a Hypertext Markup Language
document to said first software layer; and
generating, by the first software layer, said user interface based on said Hypertext
Markup Language document.

73. (New) The network device of claim 72, wherein causing said second software
layer to send a Hypertext Markup Language document comprises:
receiving an object identifier for a Management Information Base object;
using said object identifier to search one or more files for entries associated with
said Management Information Base object; and
for each entry associated with said Management Information Base object,
generating Hypertext Markup Language text that, when decoded by an HTTP client, will
cause the client to display information contained in said entry.

74. (New) The network device of claim 72, wherein generating Hypertext Markup
Language text for an entry comprises:

transmitting a query to said third software layer to retrieve a current value associated with a second Management Information Base object, said second Management Information Base object being a component of said Management Information Base object that is identified in said entry;

receiving from said third software layer said current value associated with said second Management Information Base object; and

generating Hypertext Markup Language text that, when decoded by an HTTP client, causes the HTTP client to generate a display that identifies said second Management Information Base object and displays said current value of said second Management Information Base object.

75. (New) The network device of claim 74, wherein generating Hypertext Markup Language text for an entry further comprises generating an anchor that contains a second MIB object identifier, wherein said second MIB object identifier uniquely identifies said second MIB object.

76. (New) The network device of claim 75, wherein the code further causes the one or more processors to perform the following comprising:

said second software layer receiving from said first software layer said second MIB object identifier and a new value for said second MIB object in response to a user selecting said display that identifies said second MIB object; and

said second software layer transmitting command to said third software layer to cause said third software layer to update configuration data associated with said second MIB object to said new value.